RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

10/517, 939							
PCT							
08/22/2005							

ENTERED



PCT

RAW SEQUENCE LISTING DATE: 08/22/2005
PATENT APPLICATION: US/10/517,939 TIME: 17:01:01

Input Set : D:\56446-20079.01 - Seqlist (client).txt

Output Set: N:\CRF4\08222005\J517939.raw

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4 <110> APPLICANT: Steer, Brian
      5
              Callen, Walter
      6
              Healey, Shaun
      7
              Hazlewood, Geoff
      8
              Wu, Di
      9
              Blum, David
     10
              Esteghlalian, Alireza
     12 <120> TITLE OF INVENTION: XYLANASES, NUCLEIC ACIDS ENCODING THEM
     13
              AND METHODS FOR MAKING AND USING THEM
     15 <130> FILE REFERENCE: 564462007901
     17 <140> CURRENT APPLICATION NUMBER: 10/517,939
C--> 18 <141> CURRENT FILING DATE: 2004-12-13
     20 <150> PRIOR APPLICATION NUMBER: PCT/US03/19153
     21 <151> PRIOR FILING DATE: 2003-06-16
     23 <150> PRIOR APPLICATION NUMBER: 60/389,299
     24 <151> PRIOR FILING DATE: 2002-06-14
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    43 ggcgtgtacg agtactcccg ccacgcccgc tcgatcctcc acacctgcgt gcaccagggc
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    44 gaggacggtg aaggctatcc gatgtggaac ccggagaacc atctgatcaa gttcatcccg
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    45 gaaaccgaat ggaccgaccc gtcctaccat ctgccgcact tctacgaggt gttcgccgag
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    48 acgccgcacg tcgacgagcg cgaccactgg catttctact ccgacgccta ccgcaccgcc
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    49 ggcaacatcg ggctggactg cctgtggaac ggcgtcgtgc cggaactgtg cgatgcgaat
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                                                                               960
    51 acgccggtgg acgagaccgt gctgcacccg gtcggcttca tcgccgccac cgccgaaggc
    52 togotogoog cgatgoacto goaggagoog gacgogotog acaacgogat cogotoggtg
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    53 cgcctgctgt gggacacccc gatccgcacc ggcacgcgcc gctactacga caacttcctc
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Input Set : D:\56446-20079.01 - Seqlist (client).txt

Output Set: N:\CRF4\08222005\J517939.raw

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Input Set : D:\56446-20079.01 - Seqlist (client).txt

Output Set: N:\CRF4\08222005\J517939.raw

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	aacaaactgt ttgttaacgg					120							
	actggaagcg acatggcgta					180							
	atgtcctacg gcatgatgat					240							
	tggaaatggg caagaaccta					300							
	tatttctcat ggcagtgcag					360							
	ggcgaggaat actttattac					420							
	ggtactacaa acataaacaa					480							
	cgccgcaaac cggggaacgg					540							
	tatatggtta gattcgccac					600							
	ttaccggcat tctatgatgt					660							
	ctctacggta tctgggctga					720							
	gcggcgacca caagccgttc					780							
	ccggattatg ccggctttga					840							
	tatgacgcgt ggcgtatcgc					900							
	tcctggcaga agacatttgc					960							
	tcttacggaa accgctggac					1020							
	cttgtcggct gtaacgcggt					1080							
	atcgaagact tctggaacat					1140							
	ctgtatatga tgagcatgct					1200							
	accacgcccg ccaacagttc					1260							
	agcgcacaag ccgacattgc					1320							
	acaacaacg gtacagccct	-				1380							
	acgataaaga aagaatacct					1440							
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	atcagcccga caaccgcgac					1560							
	accatgacgc ttaatgggaa					1620							
	agcggaactg actactcaac					1680							
	aagcaggcta acggcacagt					1740							
	attgacatca cggtaaaaga					1800							
	actgacaacc tgcccaacgg			_	_	1860							
	accggaggag ctttggtaat					1920							
	ccctttagtg taacaggtaa					1980							
	gtatccggag atttcactta					2040							
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Input Set : D:\56446-20079.01 - Seqlist (client).txt

Output Set: N:\CRF4\08222005\J517939.raw

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Input Set : $D:\56446-20079.01 - Seqlist (client).txt$

Output Set: N:\CRF4\08222005\J517939.raw

213 Met Thr Lys Gly Lys Tyr Arg Tyr Tyr Asp Gly Cys Leu Tyr Met Met 214 370 375 375 380 380 380 380 400 401 401 401 401 401 401 401 401 40	211 212		Asn	Ala 355	Asn	Ala	Trp	Lys	Phe 360	Ile	Glu	Asp	Phe	Trp 365	Asn	Ile	Ser
216 385				Lys	Gly	Lys	Tyr	_		Tyr	Asp	Gly		Leu	Tyr	Met	Met
217 Thr Thr Pro Ala Ash Ser Ser Ser Ile Thr Pro Thr Thr Ala Ser Phe Ala Ser Ala Gln Ala Asp Ile Ala Val Thr Val Ala Leu Thr Ala Ser Ala Gln Ala Asp Ile Ala Val Thr Val Thr Ile Leu Ala Val Thr Laving Val Thr Leu Ala Val Thr Leu Ala Val Thr Leu Ala Val Thr Laving Val Thr Leu Ala Val Thr Laving Val Thr Leu Ala Val Thr Laving Val Thr Lavin			Met	Leu	His	Leu		Gly	Asn	Phe	Lys		Tyr	Leu	Ser	Thr	
Asp Lys Lys Thr Ser Ala Gln Ala Asp Ile Ala Val Thr Val Thr Leu	217		Thr	Pro	Ala			Ser	Ser	Ile			Thr	Thr	Ala		
221	219	Asp	Lys	Lys			Ala	Gln	Ala			Ala	Val	Thr		_	Leu
222 435		λen	Clv	Λαn		Dhe	Car	Sor	Tla		Λan	λαn	Glv	Thr		T.a.ı	Thr
224			Gry		1111	FILE	Ser	261			Well	VOII	Gry		AIa	пец	1111
225 Glu Tyr Leu Ala Lys Gln Pro Val Gly Thr Thr Lys Leu Ala Phe Asn			Gly	Thr	Asp	Tyr	Ser	Val	Ser	Gly	Thr	Lys	Tyr	Thr	Ile	Lys	Lys
226 465				_		_								_			_
227 Phe Ser Ala Gly Gly Thr Pro Glu Leu Thr Val Thr Ile Thr Asp Thr Asp 485 485 490 490 490 495 495 495 495 490 490 495 495 490 490 495 495 495 490 490 490 495 495 490 490 490 495 495 490 490 495 490 490 490 490 495 490			Tyr	Leu	Ala	Lys		Pro	Val	GLY	Thr		Lys	Leu	Ala	Phe	
228			Com	77.	~ 3	~1		Dwa	~1	T 011	mb		mb ~	т1.	mb~	7 ~~	
229 Gly Ser Ser Ser Ile Ser Pro Thr Thr Ala Thr Phe Asp Lys Lys Thr 500		Pne	ser	Ala	GIY	_	THE	PIO	GIU	Leu		vaı	THE	ire	IIII	_	THE
230		Gly	Ser	Ser	Ser		Ser	Pro	Thr	Thr		Thr	Phe	Asp	Lys	Lys	Thr
Signature Sign		-												_		_	
233 Leu Ser Asn Ile Lys Asn Gly Ser Ala Gln Leu Thr Ser Gly Thr Asp 234 530 535 535 535 540 540 540 540 540 540 540 540 540 550 560 555 560 560 565 560 565 560 565 560 565 560 565 560 565 560 565 560 565 560 565 560 575 570 575 570 575 570 575 570 575 570 575 570 575 570 575 570 575 570 575 570 575 570 575 570 575 570 575 570 575 570 575 570 575 575 570 575 575 570 575 575 570 575	231	Gly	Ala	Gln	Ala	Asp	Ile	Ala	Val	Thr	Met	Thr	Leu	Asn	Gly	Asn	Thr
234															_		
235 Tyr Ser Thr Ser Gly Ser Thr Val Thr Ile Lys Lys Glu Tyr Leu Ala 236 545		Leu		Asn	Ile	Lys	Asn	_	Ser	Ala	Gln	Leu		Ser	Gly	Thr	Asp
236 545		m		m1	a	a1	C		17-7	шъ	T 1.	T		~1	M	*	77.
237 Lys Gln Ala Asn Gly Thr Val Thr Leu Thr Phe Thr Phe Ser Ala Gly 238 250 255 270		_	ser	THE	ser	GLY		Thr	vai	THE	тте	_	гаг	GIU	TYL	Leu	
238 565 570 575 239 Ala Ala Gln Thr Ile Asp Ile Thr Val Lys Asp Thr Thr Gly Gly Ala 580 580 580 585 585 590 590 241 Ala Gly Ile Lys Tyr Asn Phe Ala Thr Asp Asn Leu Glo 590 600 600 600 605 605 605 605 600 <td< td=""><td></td><td></td><td>Gln</td><td>Δla</td><td>Asn</td><td>Glv</td><td></td><td>Val</td><td>Thr</td><td>T.e11</td><td>Thr</td><td></td><td>Thr</td><td>Phe</td><td>Ser</td><td>Δla</td><td></td></td<>			Gln	Δla	Asn	Glv		Val	Thr	T.e11	Thr		Thr	Phe	Ser	Δla	
240		_,	U		11011			• • • •							202		027
241 Ala Gly Ile Lys Tyr Asn Phe Ala Thr Asp Asn Leu Pro Asn Gly Tyr 242	239	Ala	Ala	Gln	Thr	Ile	Asp	Ile	Thr	Val	Lys	Asp	Thr	Thr	Gly	Gly	Ala
242	240				5,80					585					590		
243 Pro Lys Tyr Ser Ser Ser Asp Ile Ser Ala Thr Ile Thr Gly Gly Ala 244 610 610 615 615 620 620 620 620 620 620 620 620 620 620		Ala	Gly		Lys	Tyr	Asn	Phe		Thr	Asp	Asn	Leu		Asn	Gly	Tyr
244 610 615 615 620 245 Leu Val Ile Thr Lys Thr Gly Asn Asn Ser Ser Pro Lys Ile Thr Leu 246 625 630 630 640 247 Pro Phe Ser Val Thr Gly Asn Leu Ser Gly Tyr Thr Gly Ile Lys Ile 645 655 655 249 Asn Val Lys Gly Val Ser Gly Asp Phe Thr Tyr Lys Val Leu Asn Ala 250 660 660 665 665 251 Ala Ile Gly Ser Thr Asn Leu Gly Ser Val Asn Asn Ala Pro Ile Pro 252 675 680 685 253 Asn Gly Ser Phe Gly Asp Val Thr Ile Pro Ile Thr Gly Gly Thr Asn 254 690 695 700 255 Thr Gly Asp Leu Asp Ile Ser 256 705 710 258 <210> SEQ ID NO: 5		_	_		_	_	_	_		_		1		-	~7	~7	
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246 625		T. - 211		τlם	Thr	Lare	Thr		Δen	Δen	Ser	Ser		Larg	Tle	Thr	T.e.11
247 Pro Phe Ser Val Thr Gly Asn Leu Ser Gly Tyr Thr Gly Ile Lys Ile 248			• • • •			_,5		Q- <i>y</i>	11011	11011	001			טינים			
248 645 655 249 Asn Val Lys Gly Val Ser Gly Asp Phe Thr Tyr Lys Val Leu Asn Ala 250 660 665 670 251 Ala Ile Gly Ser Thr Asn Leu Gly Ser Val Asn Ala Pro Ile Pro 252 675 680 685 253 Asn Gly Ser Phe Gly Asp Val Thr Ile Pro Ile Thr Gly Gly Thr Asn 254 690 695 700 255 Thr Gly Asp Leu Asp Ile Ser 256 705 710 258 <210> SEQ ID NO: 5 259 <211> LENGTH: 2106			Phe	Ser	Val	Thr		Asn	Leu	Ser	Gly		Thr	Gly	Ile	Lys	
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256 705 710 258 <210> SEQ ID NO: 5 259 <211> LENGTH: 2106				7.00	, T 011	7 ~~	T1.						700				
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VERIFICATION SUMMARY DATE: 08/22/2005
PATENT APPLICATION: US/10/517,939 TIME: 17:01:02

Input Set : D:\56446-20079.01 - Seqlist (client).txt
Output Set: N:\CRF4\08222005\J517939.raw

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VERIFICATION SUMMARY DATE: 08/22/2005
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Input Set : D:\56446-20079.01 - Seqlist (client).txt
Output Set: N:\CRF4\08222005\J517939.raw

L:4262 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:76 L:4351 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order! L:4354 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:78 L:4448 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order! L:4451 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:80 L:4657 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order! L:4660 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:84 L:4914 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order! L:4917 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:88 L:5331 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order! L:5334 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:96 L:5524 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order! L:5527 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:100 L:5612 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order! L:5615 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:102 L:5708 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order! L:5709 M:281 W: Numeric Fields not Ordered, <222> Sort in ascending order! L:5840 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order! L:5843 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:106 L:6117 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order! L:6120 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:110 L:6297 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order! L:6300 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:114 L:6616 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order! L:6619 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:120 L:6779 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order! L:6782 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:122 L:6902 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order! L:6905 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:124 L:7348 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order! L:7351 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:132 L:7522 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order! L:7525 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:136 L:7697 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order! L:7700 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:140 L:7787 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order! L:7790 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:142 L:8199 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order! L:8202 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:148 L:8288 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order! L:8291 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:150 L:8374 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order! L:8377 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:152 L:8462 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order! L:8465 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:154 L:8560 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order! L:8563 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:156 L:8672 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order! L:8675 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:158

VERIFICATION SUMMARY

PATENT APPLICATION: US/10/517,939

DATE: 08/22/2005 TIME: 17:01:02

Input Set : D:\56446-20079.01 - Seqlist (client).txt

Output Set: N:\CRF4\08222005\J517939.raw

L:8741 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:8744 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:160
L:8829 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:162
L:8914 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:164